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Office of Solid Waste and Emergency Response

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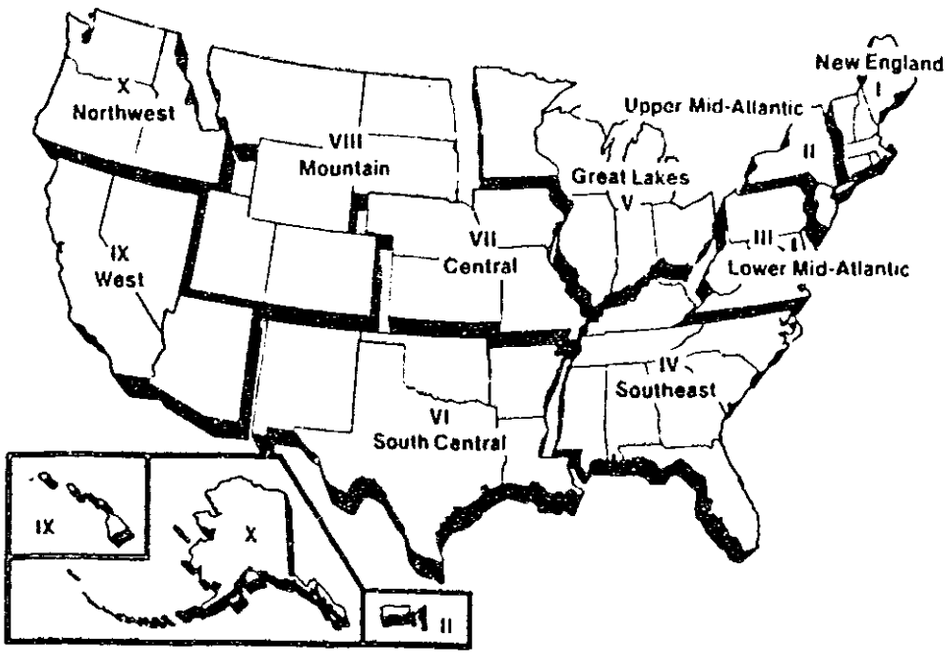
Support Document for the Revised National Priorities List — March 1989



7.0 COMMENTS ON REGION VI SITES

7.1 Arkwood Inc., Omaha, Arkansas

7.1.1 List of Commenters

NPL-U4-3-83 Correspondence dated 11/15/85 from Allen Gates, Mitchell, Williams, Selig, Jackson and Tucker on behalf of Mass Merchandisers, Inc.

NPL-U4-3-L25 Correspondence dated 4/24/87 from Mr. Don Floyd, Administrative Assistant, Office of Senator Dale Bumpers.

NPL-U4-3-L31 Correspondence dated 7/22/87 from Henry L. Longest II, Director Office of Emergency and Remedial Response, U.S. Environmental Protection Agency.

NPL-U4-3-L33 Correspondence dated 9/28/87 from Bill Doshier, Doshier & Bowers.

NPL-U4-3-L34 Correspondence dated 9/29/87 from Bill Doshier, Doshier & Bowers on behalf of H.C. Ormond, C.C. Grisham, M.J. Grisham and M.F. Burke.

NPL-U4-3-L35 Correspondence dated 11/19/87 from Deborah H. Merrick, Office of Senator Dale Bumpers to forward comments from Mr. Bill Doshier.

NPL-U4-10-9 Correspondence dated 6/4/87 from J. Winston Porter, Assistant Administrator, Office of Solid Waste and Emergency Response, Washington, D.C.

7.1.2 Summary of Comments and Response

Mr. Gates, on behalf of Mass Merchandisers, Inc. (MMI), former operator of the facility between 1974 and 1984, opposed listing the site and provided information to support his revised calculation, reducing the HRS score from 34.21 to 14.52. The commenter stated that serious errors were made in EPA's estimates for waste quantity and in the values for ground water targets.

Bill Doshier, on behalf of his clients, C.C. Grisham, former general manager and owner of Arkwood, Inc. and his wife, M.J. Grisham,

H.C. Ormond (a former Arkwood landowner), and M.F. Burke (current Arkwood landowner), submitted numerous comments through Senator Bumpers' office, via a meeting with Mr. Longest and Congressman Hammerschmidt on June 29, 1987, and by mail directly to EPA. He expressed a wide range of concerns including the Agency's re-evaluation of waste quantity following proposal and the ground water sampling results.

Mr. Doshier requested that EPA provide specific information on how the site was rescored as a result of EPA's re-evaluation of the site subsequent to proposal for listing on the NPL. Mr. Doshier was concerned that he will not have the opportunity to evaluate (prior to final listing) the content and accuracy of the changes made in the scoring. Per Mr. Doshier's request, Senator Bumpers also asked that the Agency provide detailed answers to Mr. Doshier's questions.

During the meeting with Congressman Hammerschmidt, Mr. Grisham requested copies of the revised HRS documents for the site and expressed concern that the Region VI office of EPA had "stated or implied that the Arkwood site has already been added to the final NPL."

In response, as explained by Mr. Longest and Mr. Porter, revisions to the HRS documentation that occur during the comment period are available only at the time a formal Agency decision is reached to either place the site on the NPL or drop the site from further consideration for listing. The development of the NPL is a rulemaking process and EPA places sites on the NPL using rulemaking procedures outlined in the Administrative Procedures Act (5 USC 551-559). Site proposals are announced in the Federal Register and are followed by a comment period during which all interested parties have the opportunity to provide the Agency with information regarding a site. EPA considers comments to be a valuable source of information and addresses all comments received in a document called the Support Document, of which this document is an example. The response to comments on a specific site are available to the public at the time the final rule is signed by the Assistant Administrator. The Support

Document provides the Agency's rationale for final listing decisions. In order to assure a nationally consistent basis by which all sites are evaluated and subsequently discussed in the public record, responses to public comments are thus not issued on an as-received, site-by-site basis. Accordingly, comments received for Arkwood and final revisions to the HRS record are addressed below.

7.1.2.1 News Updates. In his letter of September 28, 1987 to the Region 6 EPA office, Mr. Doshier "strongly objected" to that office's ". . . misrepresentation of this site as a Superfund site, and the vindictive manner in which you continue to alarm the people in the area." Mr. Doshier attached a copy of a Superfund Update issued during the summer of 1987 which summarized the results of recent sampling of ground water in the area of the site.

In response, the site is appropriately described as a site which is being evaluated for possible response action under Superfund and for possible listing on the NPL. [Note that removal and enforcement actions (as opposed to Fund-financed remedial actions) may be taken under CERCLA at non-NPL sites. See 40 CFR 300.66(c)(2).] Regarding the concern and anxiety of citizens in the area, as perceived by the commenter, the intent of the periodic updates is to keep the public informed of EPA involvement at the site. The update states that contamination was not detected in any of the drinking water samples, and that the responsible parties had erected a fence around the site to prevent animals and small children from wandering into the site. It is the Agency's opinion that this information is both of interest and reassuring to the community, and that there is no information in the update which suggests undue concern for immediate health threats from the site at this time.

7.1.2.2 Estimated Health Threat. Mr. Grisham submitted a portion of a transcript from an EPA/Omaha Public Meeting, which quotes representatives of EPA, who explained the estimated health threats associated with chronic exposure of PCP in water at levels above Federal

standards and compared them to levels observed in ground water springs near the site. Mr. Grisham also included one page from what appears to be a court transcript and which discusses the same issues.

In response, Mr. Grisham did not specifically give his reasons for submitting these transcripts. The health-related explanations given by the EPA representatives answered specific questions asked during the public meeting and the court proceedings. For purposes of HRS evaluation, however, state and federal drinking water standards and other health advisory limits are not pertinent to HRS scoring of a site. On July 16, 1982 (47 FR 31188), when responding to public comments on the proposed HRS, and again on September 8, 1983 (48 FR 40665), the Agency addressed the issue of observed releases that occur within regulatory limits. An observed release, which represents a 100 percent likelihood that substances can migrate from the site, is defined by the HRS as having occurred when a contaminant is measured at significantly higher levels than background levels. Even though the observed levels may be lower than regulatory limits, an observed release has nevertheless occurred.

The observed release factor is not intended to reflect the hazard presented by the particular release. Instead, the hazard is approximated by the total HRS score, which incorporates the observed release factor with other factors such as waste quantity, toxicity, and persistence. This score reflects the hazard of the site relative only to the other sites that have been scored. The actual degree of contamination and its effects are more fully determined during the Remedial Investigation that may be undertaken after a site has been listed.

Mr. Doshier requested that the Regional Administrator reconsider EPA's "insist[ence] on the normal nationwide procedure for Superfund sites that just cannot be afforded by [his] client". The commenter complained that the RI/FS plan is extravagant in cost.

In response; an RI/FS is a study, not a permanent remedy at a site, and may be conducted as appropriate regardless of whether a site is listed on the NPL (See 51 FR 21056, June 10, 1986). The question of whether an RI/FS should be conducted and its potential costs are not a consideration at the site scoring stage.

7.1.2.3 Ground Water Contamination. Mr. Gates stated that several domestic wells between the site and the Omaha city well have not shown contamination and that those wells could act as an early warning system. Nor, he stated, has the well at the treatment plant shown contamination after repeated sampling.

Mr. Doshier stated that "there are not any reports indicating that several of the wells in the area may be contaminated . . . the last report showed that there are no wells contamirated and even the on-site well is clear." In a later comment, Mr. Doshier submitted copies of analytical results of approximately 30 samples taken from wells and other sites near the Arkwood site in May 1987. Mr. Doshier stated that all samples showed non-detectable levels of all chemicals except one location, namely Cricket Spring which showed 2.3 ppm of pentachlorophenol. He contended that "this evidence also proves that the spring itself is clearing up and will soon be below the objectionable levels of penta[chlorophenol]."

In June 1987, Mr. Grisham contended that the site is not presenting a threat to the environment and that wells located both on and off site are not contaminated. He stated that a nearby spring which had been contaminated is now clean.

In response to these comments, the presence of uncontaminated wells in the aquifer of concern within 3 miles of the site does not refute the evidence of an observed release. Where EPA determines that data substantiating a release or presence of contaminants are valid, EPA assigns values based on that data. This is true even if subsequent or additional sampling fails to detect the same contaminants. Such an

approach is consistent with Section 3.1 of the HRS manual (47 FR 31224, July 16, 1982) and recognizes that many releases vary in concentration through time or occur sporadically. Thus, negative results during one or more sampling intervals cannot refute a finding, when based on valid sampling and analyses, that an observed release has occurred. In this case, EPA evaluated ground water data collected at the site at several different times and determined that the data from these samplings show that an observed release, as defined by the HRS, has occurred from the Arkwood facility.

Analysis of water samples by several parties since 1983 has shown the presence of pentachlorophenol (PCP) at Cricket Spring as recently as April 1988. As shown in the HRS documentation record at the time of proposal (Reference 3), a sample taken from Cricket Spring by McClelland Consulting Engineers in June 1983 showed 10 ppm for PCP. Similar results were reported for numerous samples taken during the remainder of 1983 and throughout 1984. Lower levels (1.8 to 5.1 ppm) were reported by McKesson Environmental Services, IT Analytical Services, and Geraghty and Miller during 1985. These levels were measured with a method having a detection limit of 0.005 ppm. In July 1987, EPA again sampled Cricket Spring at its discharge point, and results were reported as 5.7 ppm for PCP. Sampling carried out by ERM-Southwest, Inc. for Mass Merchandisers Inc. in April 1988 showed 1 ppm for PCP in Cricket Spring. Based on the above results, it is EPA's position that sampling has indicated migration of PCP to ground water and that there is quantitative evidence that an observed release, as defined by the HRS, has occurred. Data collected since proposal of the site for pentachlorophenol in ground water have been added as References 11 and 16 to the HRS documentation record. However, EPA has removed the ground water PCP data described in the proposed package for the Behren wells, since the levels reported (0.00021 ppm and 0.00024 ppm) were very low and no detection limits were reported. Regarding Mr. Doshier's and Mr. Grisham's statements that Cricket Spring is clean or

clearing up, the data described above do not suggest that ground water discharging from the spring is "clearing up" or free of the contamination.

In response to MMI's suggestion that the uncontaminated wells in the area, including the municipal well, could act as an early warning system, the Agency notes that the detection of contaminants in private water supply wells to indicate approaching contamination of a municipal supply is not relevant to the scoring of the site. Nor does EPA delay listing a site until observed drinking water contamination occurs.

7.1.2.4 Waste Quantity. Three waste sources were included in the proposed HRS evaluation for waste quantity: (1) an estimate made by Mr. C.R. Barker, Vice President for Support Services, MMI, that 500 gallons of waste were generated per year at the plant (Reference 5); (2) an impoundment, also referred to as a railroad ditch in which wastes from the treatment process were placed (References 5 and 9); and (3) a sawdust pile contaminated with PCP (Reference 10). Comments expressing concerns about use of these waste sources to score the site are addressed below.

Mr. Gates contended that the value for waste quantity is significantly overestimated since the wastes placed in the railroad ditch are the same wastes estimated in the HRS documentation record at the time of proposal to have been generated over the life of the plant (500 gallons of waste per year for 22 years, or 55 cubic yards) and which were also counted in the total EPA estimate for waste quantity. The commenter also stated that it is inappropriate to base the score for waste quantity on the total volume of contaminated soil in the railroad ditch.

Mr. Gates stated that the EPA estimate for waste quantity in the sawdust pile represents a double counting of the waste generated at the site. The commenter explained that none of the sawdust or shavings in this area originally contained treatment chemicals since the wood planing equipment was used only on untreated wood. The commenter attributed the

pentachlorophenol (PCP) observed in the sawdust pile to liquid waste applied for dust control, and stated that these wastes were the same wastes counted in the total quantity generated at the plant.

Mr. Gates provided measurements and a photograph to show that the sawdust pile (evaluated under waste quantity) has a surface area of 2,108 square feet and an average depth of 6 to 9 inches. These dimensions result in a total volume of less than 60 cubic yards, substantially less than the 6,111 cubic yard estimate based on Reference 10 in the HRS documentation record at the time of proposal. The commenter further provided that "to the best of MMI's knowledge," no material has been removed from or added to the pile since termination of treatment operations in 1984.

Mr. Doshier submitted a report by Cranmer and Associates (CAI) which provides a reevaluation of the HRS waste quantity factor. The report estimated that approximately 1,770 gallons of creosote and 150 gallons of PCP were released on the site over a 20-year period. According to the CAI report, the calculations were based on a number of assumptions regarding factors including inflation rates, sales volumes, and relative volumes of PCP and creosote used annually. The calculations assumed a constant percentage of waste generated based on the reported 500 gallons of waste released in 1981.

In addition, the CAI report reiterated Mr. Gates' comments regarding the "double counting of wastes in the railroad ditch and the sawdust pile with the total wastes estimated to have been generated at the plant."

In response, the Agency has carefully reviewed all of the information available to date on wastes generated at the Arkwood site and has decided to include only the volume of the railroad ditch, where waste oils were placed and burned, and the volume of the treatment room sump, which collected materials draining from the process area. An explanation follows.

According to page 2-11 of the RI/FS Final Work Plan (added to the revised HRS documentation as Reference 11) waste oils and sludges were deposited into a "ditch located in the railroad right-of-way (north of the treatment cylinder and treating room), . . . [and] periodically the waste oil in the ditch would be burned . . . the practice of burning excess waste oil in the railroad ditch was discontinued in 1973." According to Reference 5 in the proposed record, discharges of steam condensate from the treatment process were also placed in the ditch. A number of samples taken in the ditch have shown PCP and other contaminants (Reference 4 in the record at the time of site proposal and Reference 1 added in response to these comments).

Although the estimate in References 5 and 9 in the proposed HRS record stated that the railroad ditch measured 40 x 15 x 3 feet, subsequent measurements obtained by the Agency indicate that the ditch is 60 feet long. A memorandum documenting this measurement has been added to the HRS documentation record as Reference 12. Thus, the Agency believes that an estimate of a once-filled volume of the ditch, or 2,700 cubic feet (100 cubic yards), is a reasonable estimate of wastes which were placed in this area. Mr. Gates' concern that EPA has based the score for waste quantity on the total volume of contaminated soil in the railroad ditch is irrelevant since, as noted in Reference 12, the ditch was empty when measured by EPA. Thus, the once-filled volume is an estimate of the quantity of waste oils and sludges that were placed in the ditch and subsequently burned; the estimate does not include soils in the ditch that have become contaminated as result of this practice.

Regarding the treatment room sump, and according to Mr. C.R. Barker, manager of MMI, the "treatment cylinders and tank piping of the Arkwood plant fed into a small treatment building, which had a steel reinforced concrete sump to catch drippage and spillage. The capacity of the sump is approximately 7,500 gallons" (Reference 17 added in the revised HRS record). In October 1983, a spring sample collected by McClelland Consulting Engineers, Inc. near the site showed a level of 97 ppm of PCP.

Mr. Barker explained in 1983 that "they recently discovered that a crack in the floor of the treating room pit was apparently allowing some of the pit contents to leak from the pit" (Reference 13 added in response to comment). Since the pit was leaking PCP contaminated materials for some unknown period of time, EPA has considered the once-filled capacity of the pit in the evaluation of waste quantity as a conservative estimate of 7,500 gallons, or 37 cubic yards.

With regard to the estimate that 500 gallons of waste were generated at the plant per year, the Agency has decided not to include this quantity since it is not clear whether this amount represents wastes from "wash down of the treatment room floor and the cleaning of the treatment cylinder" as suggested in Reference 5 in the proposed HRS record, or a total of all waste generated at the plant (as assumed by both EPA in the proposed HRS scoring and by the commenters). It was also noted in Reference 5 that "these wastes [were] accumulated in a tank and then spread over the storage yard for use as dust control." If the latter wastes do represent the 500 gallons per year, then wastes deposited in other areas, for example the railroad ditch, would represent an additional quantity. However, EPA was not able to obtain sufficient information to clarify the record, and the "500 gallons/year" has been removed from the total waste quantity determination.

Regarding the sawdust pile, the Agency accepts the commenters' statements that the liquid wastes applied to the pile for dust suppression may be part of the wastes estimated to have been generated by the plant. However, as explained above, EPA was not able to obtain sufficient information to establish what wastes the "500 gallons/year" represented, and whether this volume was used to spray the dust pile. Moreover, if the material in the sawdust pile was sprayed after it was deposited, the volume of the pile could not be included since it does not represent waste as "received", as required by the HRS (47 FR 31229, July 16, 1982).

Therefore, the HRS documentation record has been modified to exclude the volume of the sawdust pile.

In summary, the revised HRS record includes the volume of the railroad ditch and the treatment room sump which, combined, total 137 cubic yards, giving a factor value of 4 for waste quantity as compared with the original HRS value of 8. The Agency believes that this is a conservative estimate since it does not include quantities or wastes that were reported to have been placed in the sinkhole on-site, as well as other wastes for which sufficient documentation was not obtained.

7.1.2.5 Surface Pollution and Containment of Wastes. The CAI report stated that "the majority of surface pollution at the site was due to product loss due to excess treatment chemicals dripping from stored posts and convenience spraying in the storage yard" and that "the vast majority of this material was lost continuously from the site over the years with little chance of concentrating in the environment."

In response, contaminated soils were not included in the waste quantity since sufficient information to estimate the depth and areal extent of the contamination was not available. Moreover, HRS evaluation does not take into account the rate at which surface contamination is released. The Agency considered the issue of the dilution of contaminants at the time the HRS was subject to public comment (47 FR 31191, July 16, 1982). The HRS has been designed to indirectly consider environmental dilution of released hazardous substances by lowering the score of populations potentially exposed as their distance from the hazardous substances increases. This dilution effect is accomplished through the use of a population/distance matrix as discussed in Section 3.5 of the HRS Users Manual. A sophisticated analysis of attenuation or dispersion would require more information than is readily available for most releases at the initial HRS scoring stage.

The CAI report, submitted by Mr. Doshier, stated that the areas of concentrated waste which remain at the site, i.e., the wastes confined in sinkholes and pits, have been contained, are protected from rain water runoff, and that a large portion of this waste can be effectively and efficiently removed for proper disposal.

In response, the HRS evaluation requires that the waste quantity include only wastes that have non-zero containment, as defined in Table 3 of 47 FR 31229, July 16, 1982. There is no documentation to show that the railroad ditch has a non-permeable liner, adequate leachate collection system, or other characteristics which would result in a value of zero for containment for the ground water route. As explained above, the sump was found to be leaking to the ground. Regarding the sinkholes, it is doubtful that the containment value would be zero, since these surface features typically allow direct connection to ground water. However, the quantity for sinkholes was not scored. With regard to possible runoff, the surface water route was not scored since there are no known surface water targets within 3 miles of the site.

7.1.2.6 Dioxin Contamination. Mr. Doshier stated that he does not believe there is any dioxin present at the site, despite the Regional Administrator's statement in his letter of April 8, 1987 (submitted with Mr. Doshier's comment dated September 29, 1987) that dioxin was found in samples from the site.

In response, sampling in June 1985 showed dioxins in the sink hole on the site, the wood chip pile and the railroad ditch. These data have been included as part of Reference 11 in the revised HRS documentation record. However, they were not used in the HRS evaluation of the site.

7.1.2.7 Sampling of Sawdust Pile. In a footnote to his comment, Mr. Gates questioned sample results he stated were obtained by the Arkansas Department of Pollution Control and Ecology (ADPC&E) in 1979, and which showed PCP at levels of 30,000 ppm and 23,000 ppm in the sawdust

pile. The commenter stated that they have recently sampled 3 different portions of the sawdust pile and analytical results showed PCP at 0.5 ppm, 2.1 ppm, and 170 ppm. He stated that splits of these samples were retained for EPA analysis.

In response, it is assumed that the ADPC&E results referred to by the commenter are those collected in October 1981 and included as Reference 4 in the HRS documentation record at the time of proposal since there are no analytical results included from 1979 sampling. Regardless of the exact dates of sampling, negative results from a later sampling do not refute an earlier finding, as explained earlier in Section 7.1.2.3. However, both the results submitted by the commenter and the results referenced in the HRS documentation record at the time of proposal confirm that PCP is present in the sawdust pile. PCP was also detected at a level of 5,600 ppm in a sample from the railroad ditch described above (Reference 4 in the proposed HRS record). Although the volume of the sawdust pile is not being included in the total for waste quantity (as explained above), sampling results from both the pile and the railroad ditch clearly attribute the contamination found in ground water to the facility.

7.1.2.8 Ground Water Targets. Mr. Gates disagreed with several factors affecting the ground water targets score and suggested corrections that would lower the total ground water targets score from 29 to 16. Mr. Gates presented several reasons to support his belief that the Omaha city water well and other wells in the area are not in any way threatened by waste at the site. It is Mr. Gates' belief that there is a "substantial barrier" between the shallow ground water system at the site and the deeper aquifer supplying the Omaha municipal water system and other ground water users in the area. The commenter also stated later that "it is believed that the contaminants enter the wells via the shallow solution channels because the wells are cased only into the top of the limestone (and not to the depth of the solution channels) and a 300 foot thick confining bed exists below the shallow waterbearing zone."

In response, Mr. Gates did not provide data to support his claim that several thick aquicludes exist between the shallow zone and the aquifer tapped by the Omaha well. Since proposal, EPA has reviewed information on geology in the Omaha area, and according to well logs for wells within 3 miles of the site, the Mississippian (represented by the Boone formation) unconformably overlies the Ordovician (represented by the Powell and Cotter formations). Discontinuously separating the Boone and Powell is the Chattanooga shale. Well logs for wells within 3 miles of the site show that the shale layer is absent in many locations and, according to a geologist at the University of Arkansas, the Chattanooga shale outcrops near Omaha (References 14 and 15 added to the HRS documentation record). For example, according to the well log of the new Behren well installed roughly 900 feet from the site in 1982, this shale layer is missing. Since the shale is not continuous throughout the 3-mile radius, it is the Agency's position that the Boone limestone formation and the underlying Ordovician dolomite act as one aquifer of concern for HRS purposes; all drinking water wells within 3 miles of the site are therefore included in the HRS evaluation for targets. Well logs and other relevant information that clarify EPA's description of the aquifer of concern have been added to the HRS documentation record as References 13, 14, and 15 in response to Mr. Gates' comment.

It is noteworthy that wells in the area are cased anywhere from 10 to 80 feet, providing "a possible interconnection between the Boone and Powell/Cotter aquifers since the casing most likely doesn't penetrate the entire thickness of the Boone" (Reference 15). Mr. Gates indicated in his comment that wells are cased "only into the top of limestone." The 1,315-foot deep Omaha municipal well, for example, is cased to only 60 feet, leaving the remaining 1,255 feet open to the shallow zone where contamination has already occurred (Reference 5 in the HRS documentation record at the time of proposal).

7.1.2.9 Flow Gradient. Mr. Gates argued that the hydraulic gradient from the site is northwestward, whereas the Omaha municipal well is located to the northeast. The commenter also stated that the distance from the site to the Omaha city well is 1 mile.

In response, because of the need to develop a nationally uniform scoring system that could be used to score a large number of sites with commonly available data, information of such level of detail as ground water flow gradients is not required in order to determine target populations under the HRS. As explained in the preamble to the NCP (47 FR 31190, July 16, 1982), determining the extent of population actually exposed or threatened by using ground water flow information is generally not practicable. In many instances the information is not available, and in others the flow direction varies. Even where there is extensive knowledge of the local geohydrology, interpretation is nearly always subject to dispute. Requiring a precise measure of the affected population would add inordinately to the time and expense of applying the HRS. Therefore, provisions for limiting the area of concern based on flow are not included in the HRS. Instead, the HRS utilizes a radius (distance of 3 miles or less) around the site when determining the distance to the nearest well in the contaminated aquifer and the population at risk due to actual or potential contamination, provided that a discontinuity in the aquifer does not exist between the site and the well being scored for purposes of the HRS.

7.1.2.10 Affected Population. Mr. Gates stated that there are only 10 houses in the immediate vicinity of the plant that could be affected by contamination in the shallow ground water system, giving an HRS value of 1 for population served by ground water.

In response, Mr. Gates did not provide evidence to support his estimate for 10 houses. The Agency has recounted the target population drawing from the aquifer of concern within 3 miles of the site. According to U.S. Geological Survey topographic maps, there are a total of 193

dwellings within 3 miles of the site, including residences in the town of Omaha. Assuming there are 3.8 persons per dwelling, this gives a total population of 733 and an HRS factor value of 2 for the population served, the same value assigned in the proposed HRS evaluation. It should be noted that the HRS documentation record at the time of proposal gave a target population based on 174 dwellings, as derived from a circular area of 3 miles around a point roughly at the center of the Arkwood facility. The recount of 193 dwellings is based on an area within a 3-mile radius extending from the boundaries of the site; these boundaries are defined by the location of Cricket Spring where PCP has been detected, and other points of PCP contamination as determined by analytical sampling. References 11, 13 and 16, which include information on the location of sampling points, have been added to the HRS documentation record.

7.1.2.11 Ground Water Use. Mr. Gates stated that users of private wells near the site have a municipal water supply available that is an alternate, unthreatened source of drinking water and, therefore, that the ground water use factor should be reduced from 3 to 2.

In response, according to the HRS as explained in 47 FR 31231, July 16, 1982, the municipal system does not constitute a readily available, alternate unthreatened source for two reasons. First, extending the municipal system to well users near the site would require construction of a supply system, and it is therefore not readily available. Secondly, and as explained previously, the Omaha municipal well is in the aquifer of concern within 3 miles of the site and is, therefore, considered threatened by the Arkwood site.

7.1.2.12 Site Status. Mr. Doshier stated that the Arkwood site is "not an abandoned hazardous waste disposal site. This was an ongoing treatment plant, like hundreds of others throughout the country which was voluntarily shut down and dismantled when the landowner learned that the operation did emit a low level of hazardous waste."

In response, sites that are active operating facilities or voluntarily closed are not excluded from CERCLA, which broadly authorizes the Agency to respond to a release or threat of release of a hazardous substance, pollutant or contaminant into the environment [CERCLA, Section 104(a)].

7.1.2.13 Remedial Efforts. Mr. Gates pointed out that the owners of the site have adequate financial resources to carry out any necessary remedial actions, and they have been cooperating with state officials for years in remedial investigation and response activity. Also, they noted that a Consent Order for the site was almost completed.

In response, in its rule-making of September 21, 1984 (49 FR 37075, 37078), the Agency addressed the question of whether response activities should affect site scoring and listing. Because the HRS score is intended to be an objective reflection of certain characteristics of the site prior to any steps being taken to change those characteristics, the Agency concluded that response actions should not affect the original score.

The factors the Agency considered in developing this policy are enumerated in the September 21, 1984 rule-making. They include the purpose of the NPL as stated in the legislative history of the law, the objectives of protecting public health and the environment, and the need to administer the program consistently. The Agency specifically addressed the need of local residents to know about the conditions at the site relative to other sites, providing incentives for early and effective actions, the variability of agreements between potentially responsible parties and governmental agencies, financial viability of potentially responsible parties, and the need to encourage timely and complete responses.

Instead of changing site scores, the Agency takes into account such steps as remedial response activities, including those undertaken and completed pursuant to formal agreements with governmental agencies, by

assigning "Response Categories" to designate the type of response underway and "Cleanup Status Codes" to indicate the status of cleanup activities underway. These categories and codes and their application are described in the Agency's rule-making of June 10, 1986 (51 FR 21102). Accordingly, the Agency will consider the remedial response activities undertaken at Arkwood and will assign the appropriate category and status code.

7.1.3 Conclusion

The original migration score for this facility was 34.21. Based on the changes noted above, the final HRS scores for Arkwood Inc. are:

Ground Water	50.08
Surface water	0.00
Air	0.00
Total	28.95